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# PUBLIC HEALTH REPORTS

VOL. XXVIII.

OCTOBER 3, 1913.

No. 40.

## SCHOOL HYGIENE.

REPORT OF THE MEETING OF THE FOURTH INTERNATIONAL CONGRESS ON SCHOOL HYGIENE, BUFFALO, N. Y., AUGUST 25-30, 1913.

By J. W. SCHERESCHEWSKY, Surgeon, United States Public Health Service.

The Fourth International Congress on School Hygiene met in Buffalo from August 25 to August 30, 1913. Some 2,000 Americans, interested in various phases of school hygiene, were present at the section meetings.

The congress was divided into the following sections:

Section 1. The hygiene of school buildings, grounds, material, equipment, and upkeep.

Section 2. The hygiene of school administration, curriculum, and schedule.

Section 3. Medical, hygienic, and sanitary supervision in schools.

### Mental Hygiene.

There was one feature which aroused much interest. This was the discussion of the importance of mental hygiene and the necessity of ordering mental education in children, not only with a view to developing their mentality to the point of greatest working efficiency, but also to secure their perfect adjustment on the intellectual level determined by their respective innate capacities.

There can be no question that we have laid too much emphasis in the past upon the influence of bodily defects only in the development of children, and have lost sight of the influence of imperfect states of mental adjustment of the organism to the environment conditions productive of mental instability and disease.

At present our data are both incomplete and imperfect so far as they go. Much study will be required before we shall be able correctly to evaluate children, both in respect to their inherited mental capacity and their tendency to mental disease.

Moreover, the influence of environment and the ways it reacts adversely upon the mechanisms of mental adjustment require intensive study before useful data can be collected.

When, at length, we shall be in possession of such data, the various papers presented in this section indicated that we shall be in a position not only to educate the individual child to the maximum efficiency in that intellectual level to which he belongs but also by reason of the correct adjustment of his organism to his environment he will be free from the various strains due to inhibition, repression, etc., which react adversely upon the state of mental health.

It was predicted that when the data above referred to had been secured great changes, amounting to a revolution, would take place in our educational methods. It was also hinted that such revolution would be accompanied by a large increase in the funds spent for educational purposes. Great stress was laid on the value of psychopathic clinics as aids in securing the required data, and the necessity of having such clinics for the study of school children was referred to.

#### **The Binet-Simon Scale.**

Of interest in this connection was the symposium held on Friday, August 29, on the Binet-Simon scale for determining the intelligence.

A number of interesting papers were presented. Among them were papers by Prof. W. H. Pyles on "The value to be derived from giving mental tests to all school children; by Josiah Morse, of the University of South Carolina, on "A comparison of white and colored school children, measured by the Binet-Simon scale of mental intelligence;" and by Lewis M. Terman, associate professor of education, Leland Stanford Junior University, Stanford, Cal., on "Revision of the Binet scale."

Dr. Morse's paper showed, generally speaking, that a greater proportion of white city children passed the Binet-Simon tests in the higher grades. On the other hand, a comparison between city colored children and white children in mill villages showed no great differences in their respective intelligences. Dr Morse admitted, in view of these results, that there must be an environmental, apart from a racial, factor.

It seems to the writer that it is of importance, in Southern States, where such tests are conducted, to determine the rate of hookworm infection in both races. It is to be expected, on the whole, that colored city children would show a higher rate of hookworm infection than white city children. This would be significant in view of the adverse influence of hookworm infection upon mental development.

The general consensus of opinion of the symposium was to the effect that the Binet-Simon scale was satisfactory as a means of grouping children in the lower school grades with respect to their mental development. The scale, however, was thought to be defec-

tive in the higher tests for classifying older children and adults. Some stress was laid on the changes in intellectual activity caused by the advent of puberty. It was held that birth of sex instincts was accompanied not with a general rise in level of mentality but with a radiation of mental activity, fanwise, along a variety of different channels.

It seems to the writer that there was a general misconception in this symposium of what the scale devised by Binet and Simon really is. The majority seemed to consider this scale to be a measure of the intellectual capacities. By its correct use, they thought, children could be sorted according to their innate mental abilities.

This is a misconception of the Binet scale arising, it is thought, by reason of a difference in the connotation of the word "intelligence" in French and English. In French the primary significance of this word is "mentality" and not intellectual excellence. Binet himself is not quite definite as to the precise connotation he gives to the word, but uses it in a way more significant of "degree of mental development" than of other meanings.

A great number of our educators, however, seem to use "intelligence" synonymously with "intellectual excellence."

Yet it would seem to the writer that the Binet scale is by no means a measure of intellectual capacity but rather one of mental maturity or of the intellectual level which has been attained, for mental growth is characterized by the attainment of successive levels, while intellectual capacity seems to be the ability to form numerous associations on the intellectual planes as they are attained. Binet's studies were mainly directed along the lines of determining at what average ages children attain these successive levels, and his tests are mainly devised to test if the levels in question have actually been attained.

We have thus, in his system, a measure of mental maturity. If it is desired, however, to discover the degree of perfection of mental activity within the content of the several intellectual levels, special studies must be undertaken and special tests devised in order to attain precise results.

These inadequacies of the Binet scale, however, by no means invalidate its findings as a means of comparison between the state of physical development, age, and mental maturity, nor do they diminish its usefulness in determining degrees of mental retardation.

#### **Sex Hygiene.**

Another phase of hygiene to which great prominence was given in the congress was that of sex hygiene. The open meeting held on this subject Wednesday afternoon, August 27, at Elmwood Music Hall was attended by the largest gathering of the congress.

A most able and scholarly paper was presented by ex-President Eliot, president of the congress and chairman of this section. This paper constituted an admirable summing up of the subject. The speaker recognized that no sudden improvement in sex conditions, the prevalence of venereal diseases, and morality could ever be obtained. The improvement must be gradual and the results secured by a combination of measures. No one specific remedy could be successful. Segregation and the teachings of the church have both been tried without avail. The speaker thought that the general diffusion of knowledge, the requirement of certificates of health as a preliminary to marriage, the segregation of criminals and defectives, greater simplicity, a greater attention to physical exercise in the lives of growing girls and boys, and instruction in the public schools, all combined, would, in the end, effect satisfactory results.

The general sense of the section was that the facts of reproduction and sex hygiene should be taught in the public schools by graded lectures.

#### **Illumination of Schoolrooms.**

It seemed to the writer that one of the most interesting and valuable sections of the congress was devoted to the consideration of this topic. Nevertheless, the attendance was poor.

One of the important questions discussed was that of overhead versus lateral illumination. One great objection to overhead illumination in the past has been the ocular fatigue induced by the excessive glare from white or polished surfaces reflected directly upward into the eyes from an unaccustomed direction. The absence of this condition in lateral illumination from the left has led to the general advocacy of this form of illumination. On the other hand, owing to the fact that illumination falls off in proportion to the square of the distance, laterally illuminated rooms are insufficiently illuminated on the extreme right when the lighting at the left is sufficient. On the other hand, with sufficient illumination on the right of the room, the seats on the left are likely to have an excess.

The overhead method of illumination, however, can be made satisfactory by means of ribbed glass, which diffuses the light in angular directions. This prevents undue upward reflections from white and polished surfaces.

The pernicious influence of glare from calendered paper and blackboards was also emphasized. Light-colored, mat-surface blackboards and cream-colored unglazed papers were advocated. Dr. Gstettner, of Vienna, pointed out the loss of illumination in schoolrooms caused from light absorption by the black surface of blackboards and showed, from the results of photometric measurements, the improvement in

lighting conditions following the use of light-colored blackboards and dark crayons.

An interesting paper on the extent of loss of ocular efficiency in direct, semidirect, and indirect systems of artificial illumination was read by Prof. Ferree, of Bryn Mawr College, Pa.

The speaker found that work in direct systems of artificial illumination is accompanied by a rapid fall in ocular efficiency; that in the semidirect system, where a part of the light falls directly on the work and a part is reflected from the ceiling and walls, the loss of ocular efficiency is nearly the same as that produced by direct illumination; while with indirect illumination, where no light falls directly upon the work, but all is reflected from ceilings and walls, the loss of ocular efficiency is hardly greater than with the use of diffuse daylight illumination.

#### **Intestinal Parasites in Children.**

Of interest in the session devoted to "The exciting and contributing causes of disease and physical defects in school children" was a paper read by Dr. J. A. Ferrell, of the Rockefeller Sanitary Commission, on "Intestinal parasites, the rural school a factor in spreading their infection."

This paper gave a summary of the findings of the commission in the case of 46,794 children found harboring intestinal parasites. Of these, 22,782, or 48 per cent, had hookworm infection; 7,991, or 20 per cent, had ascarides; 2,915, or 6 per cent, had *Trichocephalus dispar*; 1,246, or 2 per cent, had dwarf tapeworm; 134, or .02 per cent, had *strongyloides*; and 46, or .009 per cent, had *Oxyuris vermicularis*.

Of interest is Dr. Ferrell's statement that many of the cases of ascaris infection presented marked symptoms of retardation and anemia.

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## **PELLAGRA IN MISSISSIPPI.**

### **ITS REPORTED PREVALENCE AND GEOGRAPHIC DISTRIBUTION.**

By C. H. LAVINDER, Surgeon, United States Public Health Service.

Pellagra has been reported to be on the increase in certain localities in Mississippi. On a recent visit to the State to ascertain to what extent this reported increase existed the following interesting statistical tables were kindly furnished to me by Dr. F. L. Watkins, deputy State registrar, Jackson, Miss.

As will be seen from the tables, certain of the county health officers failed to make the required reports. However, the tables give some idea of the prevalence and geographic distribution of pellagra in the State by race and counties. The information contained in these